6V6GTA

Beam Power Tube

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:		
Voltage (AC or DC)	6.3	volts
Current	0.45 ± 6%	amp
Warm-up time (Average)	11	sec
Direct Interelectrode Capacitances (Approx.):[a]		
Grid-No.1 to plate	0.7	μμf
Grid-No.1 to cathode & grid No.3, grid No.2, and heater	9	μμf
Plate to cathode & grid No.3, grid No.2, and heater	7.5	μμf

Characteristics, Class A_1 Amplifier:

		Triode Connection[b]	
Plate Voltage	250	250	volts
Grid-No.2 Voltage	250	–	volts
Grid-No.1 Voltage	-12.5	-12.5	volts
Amplification Factor	–	9.8	
Plate Resistance (Approx.)	50000	1960	ohms
Transconductance	4100	5000	μmhos
Plate Current	45	49.5	ma
Grid-No.2 Current	4.5	–	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.5	–	-36	volts

Mechanical:

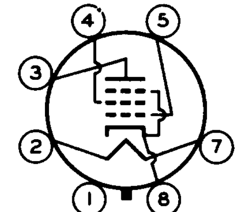
Operating Position	Any
Maximum Overall Length	3-5/16"
Maximum Seated Length	2-3/4"
Maximum Diameter	1-9/32"
Dimensional Outline	See *General Section*
Bulb	T9

Bases (Alternates):
- Intermediate-Shell Octal:
  - 7-Pin, Arrangement 1, (JEDEC Group 1, No.B7-7)
  - 6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-81)
- Short Intermediate-Shell Octal with External Barriers:
  - 7-Pin, (JEDEC Group 1, No.B7-59)
  - 6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-84)

6V6GTA

Basing Designation for BOTTOM VIEW. 7AC

Pin 1[c]-No Connection
Pin 2-Heater
Pin 3-Plate
Pin 4-Grid No.2



Pin 5-Grid No.1
Pin 7-Heater
Pin 8-Cathode, Grid No.3

AF POWER AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	350	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	315	max.	volts
GRID-No.2 INPUT	2.2	max.	watts
PLATE DISSIPATION	14	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. .	200	max.	volts
Heater positive with respect to cathode. .	200[d]	max.	volts

Typical Operation and Characteristics:

Plate Voltage	180	250	315	volts
Grid-No.2 Voltage	180	250	225	volts
Grid-No.1 (Control-Grid) Voltage.	-8.5	-12.5	-13	volts
Peak AF Grid-No.1 Voltage	8.5	12.5	13	volts
Zero-Signal Plate Current	29	45	34	ma
Max.-Signal Plate Current	30	47	35	ma
Zero-Signal Grid-No.2 Current . .	3	4.5	2.2	ma
Max.-Signal Grid-No.2 Current . .	4	7	6	ma
Plate Resistance (Approx.). . . .	50000	50000	80000	ohms
Transconductance.	3700	4100	3750	μmhos
Load Resistance	3500	5000	8500	ohms
Total Harmonic Distortion	8	8	12	%
Max.-Signal Power Output.	2	4.5	5.5	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation.	0.1	max.	megohm
For cathode-bias operation.	0.5	max.	megohm

PUSH-PULL AF POWER AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	350	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	315	max.	volts
GRID-No.2 INPUT	2.2	max.	watts
PLATE DISSIPATION	14	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. .	200	max.	volts
Heater positive with respect to cathode. .	200[d]	max.	volts

Typical Operation and Characteristics:

Values are for two tubes

Plate Voltage	250	285	volts
Grid-No.2 Voltage	250	285	volts
Grid-No.1 (Control-Grid) Voltage	-15	-19	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	30	38	volts
Zero-Signal Plate Current	70	70	ma
Max.-Signal Plate Current	79	92	ma
Zero-Signal Grid-No.2 Current	5	4	ma
Max.-Signal Grid-No.2 Current	13	13.5	ma
Effective Load Resistance (Plate to plate)	10000	8000	ohms
Total Harmonic Distortion	5	3.5	%
Maximum-Signal Power Output	10	14	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

VERTICAL-DEFLECTION AMPLIFIER

Triode Connection — Grid No.2 Connected to Plate

Maximum Ratings, *Design-Maximum Values:*

For operation in a 525-line, 30-frame system[e]

DC PLATE VOLTAGE	350 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE[f]	1200 max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE	275 max.	volts
CATHODE CURRENT:		
Peak	115 max.	ma
Average	40 max.	ma
PLATE DISSIPATION	10 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200[d] max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For cathode-bias operation	2.2 max.	megohms

[a] Without external shield.

[b] Grid No.2 connected to plate.

[c] On the 6-pin bases, pin 1 as well as pin 6 is omitted.

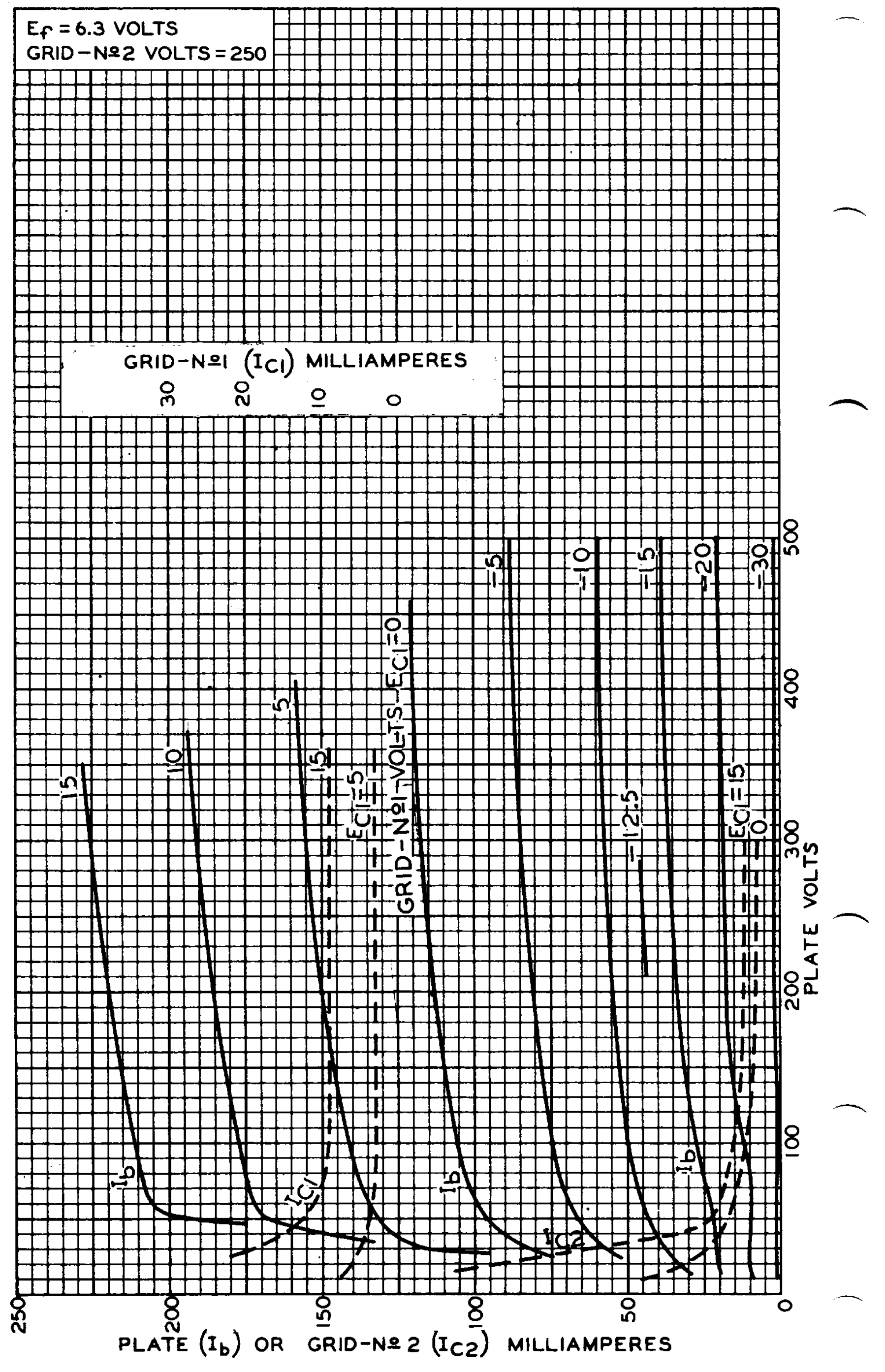
[d] The dc component must not exceed 100 volts.

[e] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

[f] This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

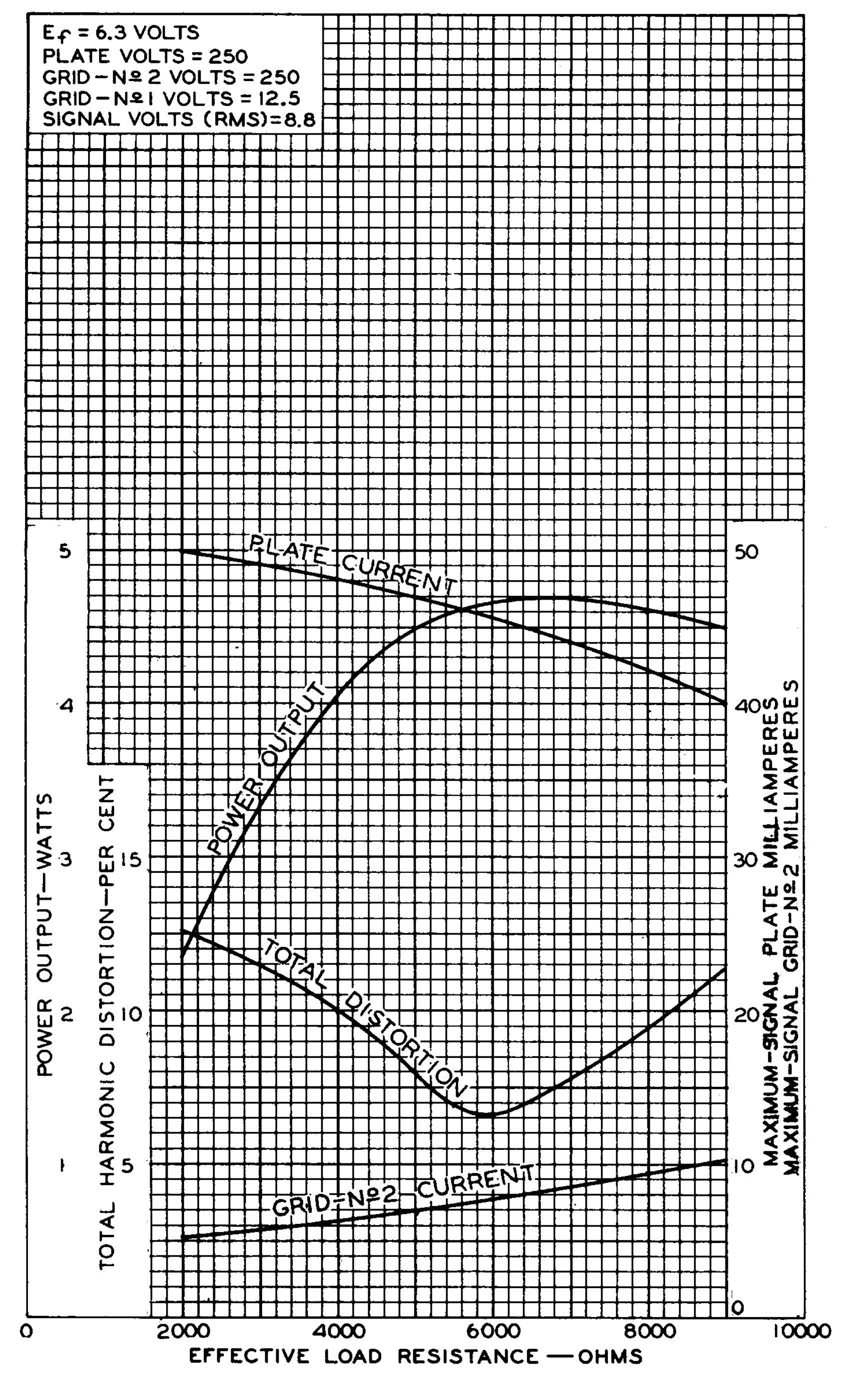
6V6GTA

AVERAGE CHARACTERISTICS



92CM–4807R2

OPERATION CHARACTERISTICS



92CM-6339R2